

Keweenaw Point Recommendations

Camping

1. General Comments

We considered three types of camping facilities.

- **Motorized primitive campsite.** Accessible by high clearance SUV or car – to be developed with toilet, fire ring, table and tent pad. Motor homes, trailers, or similar large recreational vehicles will not be able to get into these sites.
- **Non-motorized primitive campsite.** May or may not have toilet or table but will have tent pad and fire ring.
- **Wilderness campsite.** Will have tent pad and fire ring.

2. Motorized primitive campsite

A. High Rock Bay

This area has been long been used as a camping area. Originally it was thought that a small primitive motorized campsite could be developed just to the north of the big pines, where most now camp, near the boundary with The Nature Conservancy property. However, there may be insufficient land here due to the proximity to the TNC land. There is the possibility of locating a non-motorized campsite on TNC land at the rocket launcher site as people currently use this spot as a camping area (noted below). A State Forest Campground may be the most reasonable solution to accommodate motorized campers at this popular location.

B. Schlatter Lake

Develop motorized campsites at two locations around the lake with three camping pads per location. Suggested areas include (a) the existing camping location along the SW side of the lake and (b) at the existing camping location located on the east side of the lake. For future expansion, a third campsite might be considered along the NW corner of the lake near the High Rock Bay Road.

C. Schlatter Lake Island

Camping will continue to be allowed here. Small groups of only a few people will be allowed under the general State Land Rules. Reservations for large groups of over 20 people such as Boy Scouts, Girl Scouts, church groups, etc. will be required. Reservations will be by Special Event Use Permit only and issued by Baraga Area Forester. Only a limited number of camping dates will be allowed annually - this will be determined by FMFM Division.

D. Hoar Lake

Develop three motorized campsites at various locations around the lake including (a) the existing, traditional camping location, (b) somewhere along the north shore of the west bay and (c) along SW shore. Each campsite to have no more than three pads per location.

Campsites to be located at least 100 feet from shoreline so that beach will become a “commons” area for all campers.

Road easements will have to be acquired from the Hoar Lake loop road to state property around the lake before any development can occur at the proposed campsites (b) and (c) above.

E. Keystone Bay

After a new access road is constructed around the private parcel and a parking area and toilet is installed, develop a State Forest Campground in the vicinity of the beach. All campsites are to be set back at least 100 feet inland from the drop or break to the beach. No camping will be allowed on the beach, which will be a “commons” area.

3. Non-motorized primitive campsite

- Mouth of Montreal River – one-3 pad campsite on east side of the river. Two and possibly three campsites to be located on west side of river. Beach and first terrace at river mouth are to be a “commons” area. Campsites will be located farther uphill from the shoreline or river. Archeological survey of potential campsites is a must at this prehistorically active location.
- Montreal River east of the old dam site – for hikers of the proposed trail system.
- Fish Cove – location to be determined but should be in the western cove.
- Keystone Point – inland a short ways behind remnants of old fishery buildings.
- Mouth of Hoar Creek in Big Bay
- Mouth of Union Creek at the east end of Keystone Bay
- Keweenaw Point – somewhere between High Rock Bay and the Point, if possible. Extensive wetlands encroach the shoreline in most areas south of Gill Lake and may prevent much development.
- High Rock Bay – either just to the north of the “commons” area in the big pines on DNR property, or if there is not enough land to accommodate the campsite, on The Nature Conservancy’s rocket launcher site.
- Copper Lake – one, three-pad campsite, at the lake for hikers. To be constructed at the end of the existing logging trail. Logging trail to be gated or otherwise blocked to vehicular traffic where it enters state land.

4. Wilderness campsite

- Lost Lake – two single tent pads at widely separated locations.

Maintenance and Enforcement

1. Committee strongly endorses the creation of a new Conservation Officer position primarily for Keweenaw County. This person should live in the Mohawk – Calumet area. Primary duties will be to patrol newly acquired lands at the tip of the peninsula including the lakeshore by boat, enforce snowmobile regulations, hike and mountain bike the non-motorized trails, assure camping regulations are being followed, ATV use restricted from beaches and other shoreline areas plus existing snowmobile trails during non-snow season and similar duties. All hunting and fishing regulations will also be enforced as well as unregulated camping and logging.
2. Keweenaw Point lands are to be managed as a working forest with a strong recreation component by Forest, Mineral and Fire Management Division (FMFM) of the DNR. Existing logging roads and trails will be maintained for both future timber harvest as well as fire protection and other possible emergency access. Committee proposes to have the DNR create one or two positions to be located at Fort Wilkins State Park but funded by FMFM for the management and maintenance of Keweenaw Point lands. This includes primitive campsite maintenance and construction, toilet maintenance at parking areas, garbage pickup from all areas visited by recreational users, construction of hiking and mountain biking trails and non-motorized primitive campsites (with assistance from those user groups) and other duties as may arise plus assisting Fort Wilkins S.P. in a maintenance capacity when use on Keweenaw Point lands is low. This will require a new level of cooperation and coordination between FMFM and the Parks and Recreation Division of the DNR.

Motorized Access plan for Keweenaw Point

The following is a list of recommendations for motorized recreational trails:

- A. The State would sign and manage existing roads according to state forest management rules.

Note: This applies only to EXISTING roads.

- B. Establish a motorized loop through the site to provide access to the five preferred shoreline destinations to snowmobile trail specs, including campsites on Schlatter Lake.

High Rock Bay and Keweenaw Point are noted as preferred areas mainly because of ice formations during the winter. This area is largely conglomerate so vehicle impact would be minimal.

After some discussion, and before a motion was made, it was noted to list the 5 destinations. Add “....1) High Rock Bay, 2) Keystone Bay, 3) Fish Cove, 4) W. side of Montreal River, and 5) Keweenaw Point.

It was agreed the gates would be placed at 1) the junction to Schlatter Lake campsite and 2) Union Creek. This limits the trail from the Schlatter Lake campsite to Keweenaw Point then on to Union Creek to snowmobile use only – not open to ATV's in the summer.

- C. Establish a parking area at the final curve of the road to High Rock Bay and declare a 100' setback “commons” area along the shore from the curve to East Point.

“Commons Area” term was decided on because other verbiage would have the area fall under predetermined rules, regulations and management practices.

- D. Create a parking lot approximately 100' from the water at Keystone beach, west of Union Creek, for all the public to access the beach.

- E. Create motorized spur trail to level area, approximately ¼ mile behind beach at Fish Cove.

- F. Create motorized access to Hoar Lake for camping at two sites.

- G. Create a motorized spur trail to 50” specs as per state forest land rules to west area of the mouth of the Montreal River to end at approximately 600' from river outlet.

Day Use Areas

1. General Comment

These areas are set aside for all Tip of Keweenaw users on a daily basis. No camping will be allowed. They will function primarily as destination areas for beach users, scenic vistas, picnicking, rest stops for hikers and other recreational users, etc. There will be primitive campsites nearby all day use areas. Some will be motorized and others non-motorized.

Signage to be included indicating no motorized use of shoreline. Also, signs suggesting carrying out all items site users brought with them allowing for minimal trash pickup and other maintenance.

2. Schlatter Lake Island

- Survey required to determine how to regenerate native shrub and ground vegetation.
- There is the possibility of developing a 3-pad campsite or two eventually here depending on how the ground vegetation regenerates.

3. Keystone Beach

- In lieu of easements or land exchange/purchase, a new route must be developed to this heavily used beach.
- Close road leading into private land.
- Create new route to beach on old existing network of logging roads but keep it at least 200-300 yards from lake. Construct parking lot at end of road.
- Minimal maintenance and improvements on other portions of road.
- Toilet facilities, trash pickup and other maintenance as required.
- ATV and other motorized vehicle use to be prohibited from Lake Superior shoreline.

4. High Rock Bay

- Construct parking lot just inland from large pines and traditional camping area.
- Toilet facilities, trash pickup and other maintenance as required.
- ATV and other motorized vehicle use to be prohibited from Lake Superior shoreline.

5. Fish Cove

- Construct parking lot approximately ¼ mile from lake. To be developed on high, flat ground previously examined with Forestry personnel.
- Toilet facilities, trash pickup and other maintenance as required.
- Existing trail to lakeshore to be blocked to ATV and other motorized vehicles through use of gates, large rocks or root wads.

Keweenaw Point Minimum Impact Zones

Minimum Impact Zones are areas of sensitive resources, and include shoreline, river and stream corridors, steep slopes, wetlands, and areas where rare plants, habitat or other natural features occur. Some of these zones deserve permanent protection. Minimum impact zone designation will not exclude any and all activity or entry into an area, but will require special consideration and natural features surveys prior to any activity or crossing of the zones.

The original charge for Minimum Impact Zones is "to limit the use of these areas", to prevent damage to the sensitive resources. Minimum Impact Zones will require limiting motorized access and timber harvesting; trails and ORV/ATV usage shall be minimized or restricted. Once zones are designated, campgrounds, trails, roads and other uses can be assigned accordingly following thorough review and safeguarding guidelines. Continued monitoring will be required to ensure protection of these zones for the long term.

Based on botanical information, the presence of shoreline, riparian and wetland habitat, and steepness of slope, the following general areas qualify for minimum impact zones. Designation is based in part on the occurrence of rare plants, habitat and natural features (from Chadde, 2000 Natural Heritage Grants Program, Tip-of-the Keweenaw Botanical Survey). Larger blocks are proposed rather than smaller fragmented areas, although isolated smaller wetlands and steep terrain outside of the main areas should also be given appropriate consideration when proposing management recommendations.

- 1) Lake Superior shoreline with a minimum of 660 ft (1/8 mi) buffer. "The majority of rare plants known from the Tip-of-the-Keweenaw occur in these shoreline and glade habitats...", Chadde 2000; other natural features: bird habitat, archeological sites, rock outcrops; potential for erosion.
- 2) Montreal River corridor with a minimum of 660 ft buffer on each side. The Montreal River contains several rare plants and habitat, falls, and archeological sites; the lower portion of the Montreal River to Smith Fisheries is lowland conifer and contains steep slopes.
- 3) Other stream corridors with a 330 ft buffer on each side; Hoar Creek, Union Creek and the unnamed creek that runs along Bay Lake are included here; fish habitat, potential for erosion; rare plants.
- 4) Hoar Lake and surrounding wetlands; rare plants occur in wetland; fish habitat; potential for loon nesting.
- 5) Rich wetland fen between Bay and Hoar Lakes to the shore of Lake Superior; several threatened plant species; sensitive habitat; eagle nest (LSLC records).

- 6) Wetlands above Bay Lake and small streams feeding the lake; critical fish habitat; rare plants.
- 7) Schlatter Lake shorelines with a buffer of 330 ft (except north side where road runs along shore, buffer will only go to road); Schlatter Lake wetlands and surrounding unbroken areas, especially west, south and east of lake; rare plants; eagle nest on south point; potential for loon nesting. Large wetland north of Schlatter Lake included here.
- 8) Extreme steep slopes and cliffs along Mandan Road in Sections 6, 7 and 8; paralleling Union Creek (inlet to Schlatter Lake); defined by topography; rare plants; easily disturbed and potential for erosion.
- 9) Manitou Island in entirety; rare plants, bird habitat, eagle nest, general inaccessibility and desolation; fragile thin soils.

Non-motorized

1. General Trail Development

- Partner with local experienced interest groups to design, develop and maintain network of non-motorized trails that will eventually interconnect with 'greater' Keweenaw trails (Copper Harbor System, Estivant Pines, and Horseshoe Harbor). Trails will offer high-quality user experiences and a variety of trail opportunities (terrain, difficulty, scenery, etc.) This "Hiking / Biking Paths of Keweenaw" partnership would be established by the MDNR to assist them in meeting yearly trail development goals. This kind of Cooperative effort has worked well in the development of the North Country Trail. The partnership would prevent budget restrictions from stalling progress
- All trails will be developed with the enjoyment and safety of all non-motorized trail users in mind and built using sustainable methods. Preference will be given to using existing sections of trails, and separating non-motorized trails from motorized trails as feasible. Trails should be carefully planned as to minimize impact on environmentally sensitive areas.
- Non-motorized trails will be designated 'non-motorized multi-use' including but not-limited to hiking, walking, running, mountain biking, horseback riding, xc skiing, and snowshoeing. Terrain will dictate the type/level of non-motorized use while education and monitoring will help to mitigate conflict. Portions of trail are expected to follow roads/motorized routes (shared use) where terrain and sensitive areas limit new trail options.
- Non-motorized trails will also include the already developed Keweenaw Water Trail (kayak, canoe, etc.)

2. Trails

- Primary trail will be a 'shoreline trail' that begins on the Mandan Road near the intersection of Mandan Rd and Montreal River. The trail will generally parallel Montreal River to the mouth, then head east paralleling shoreline around the tip of the Keweenaw to Schlatter Lake, then northwest towards Horseshoe Harbor and finally reconnecting with Mandan Road.
- Primary trail will include connector trails as needed to control points including: parking areas, campsites and scenic locations (Montreal

Falls, Mouth of the Montreal, Fish Cove, Keystone Bay, High Rock, etc.)

- Additional, less strenuous, 'short' loops should be developed that allow for 'mini-adventures' from specific trailheads where feasible (Schlatter Lake and Hoar Lake).
- Continue promotion of already developed Keweenaw Water Trail with identification of water-accessible only primitive campsites at Fish Cove west, Keystone Point, and south of High Rock Bay.

3. Trailheads and Signage

- Trailheads should be identified at accessible locations along Mandan Road, at Keystone Bay, and near Schlatter Lake. Additional future network trailheads that would allow access could include: Copper Harbor, Keweenaw Mtn. Lodge, and Estivant Pines.
- Develop a "Hiking / Biking Paths of Keweenaw " logo and trail sign design concept to compliment the rustic State Forest trail signage (Local graphic designers would enjoy the challenge to develop such a program at N/C.) Signage should be kept to a minimum while providing both direction and confidence to users.

4. Access

- Easements (or land purchase) may be needed at Keystone Bay, Tip of Keweenaw and north of Schlatter Lake to develop recommended direct trail routes but second option would be to work around current private parcels as necessary.
- Obtain trail easements (or land purchase) for connecting trail from Estivant Pines (to Mandan Rd). Work with Nature Conservancy to incorporate Horseshoe Harbor Road into system.

Public Access

1. General Comment

These areas are set aside for all Tip of Keweenaw users. Camping will be allowed at most locations. They will function primarily as destination areas for beach users, scenic vistas, picnicking, rest stops for hikers and other recreational users, etc. There will be primitive campsites nearby. Some will be motorized and others non-motorized.

Signage to be included indicating no motorized use of shoreline. Also, signs suggesting carrying out all items site users brought with them allowing for minimal trash pickup and other maintenance.

2. Keystone Beach

- In lieu of easements or land exchange/purchase, a new route must be developed to this heavily used beach.
- Close road leading into private land.
- Create new route to beach on old existing network of logging roads but keep it at least 100 feet from lake. Construct parking lot at end of road.
- Minimal maintenance and improvements on other portions of road.
- Toilet facilities, trash pickup and other maintenance as required.
- ATV and other motorized vehicle use to be prohibited from Lake Superior shoreline.
- FMFM Division will develop a State Forest Campground in the vicinity of the beach but not right on it.

3. High Rock Bay

- Construct parking lot just inland from large pines and traditional camping area.
- Toilet facilities, trash pickup and other maintenance as required.
- ATV and other motorized vehicle use to be prohibited from Lake Superior shoreline.

4. Fish Cove

- Construct parking lot approximately ¼ mile from lake in a location west of the present trail to the shore. Topography will determine where to locate the lot. Obliterate old trail and create new one to beach on east cove.
- Toilet facilities, trash pickup and other maintenance as required.
- Existing trail to lakeshore to be blocked to ATV and other motorized vehicles through use of gates, large rocks or root wads.

Roads

1. Mandan Road

- Obtain legal easements on entire portion of road accessing Tip property.
- Minimal maintenance and improvements – some ditching and water runouts
- New bridge or arch culvert over Schlatter Creek with improved approaches on both sides, ditching and drainage to protect creek from sediment input.

2. High Rock Bay Road

- Obtain legal easement across private parcel.
- Improve approaches to two stream crossings including ditching and directing road drainage away from Schlatter Creek. Construct new crossings – either timber bridges or large arch culverts.
- Construct water runoffs to eliminate the larger puddles and mud holes along road.
- Construct parking area near High Rock Bay Point but away from the big lake (100-200 yards).
- Minimal maintenance and improvements on other portions of road. In order to retain the rustic and remote character of this road, the present width is to be maintained and not increased at all. Keep the road narrow.
- Bridges are recommended rather than culverts

3. Schlatter Lake (West) Road

- Eliminate mud hole by improved drainage or bridge/arch culvert. This will improve access to motorized primitive campsites along west shore of lake.
- Signs required

4. Keystone Bay Road

- Eliminate large mud hole by improved drainage, removing old beaver dam or possibly rerouting the road around the mud hole.
- Close road leading into private land.
- Create new route to beach on old existing network of logging roads but keep it at least 200-300 yards from lake. Construct parking lot at end of road.
- Minimal maintenance and improvements on other portions of road.
- Ban vehicular traffic to beach.

5. Hoar Lake Loop Road

- Since the Hoar Lake Loop Road is entirely on IP land, no recommendations are needed for it. This road is in satisfactory shape as is. Maintain as necessary, working with I.P.
- Bridge over Hoar Creek (outlet from Hoar Lake) will eventually have to be replaced.
- Access road to lake is very short but rutted and narrow. Minimal improvements needed to access motorized primitive campsite. Consider possible routes to additional campsite or two.

5. Fish Cove Road – spur off Hoar Lake Loop Road
 - Minimal improvements needed, better drainage in several places
 - Construct parking lot ¼ mile from lake, block existing trail from ATV use.
6. All Other Existing Roads, Two-tracks, Old Logging Roads
 - Monitor present uses. If overuse, abuse of the land, habitat destruction or other problems arise, consider gating or other types of closure to control.

A general recommendation for all roads within the Tip of the Keweenaw lands is to have signs indicating each road leading off the Mandan Road i.e. Fish Cove Road, High Rock Bay Road, Keystone Bay Road, etc.

Forest Management Recommendations

8-16-04

By Warren Suchovsky, MAT

Forest management and logging has been and continues to be a significant part of the local economy. There is ample evidence of recent logging activity throughout the general area. The acquisition of the Keweenaw Point properties by MDNR as State Forest land as opposed to State Park land suggests that management of forest stands for fiber production would be a proper use of the property.

This property is quite unique both geologically and biologically. These unique qualities will impose many restrictions upon how the timber resource is managed and utilized.

In some cases vegetative cover manipulation may be a tool used to encourage or discourage other plant species. Although many stands are not necessarily "old" chronologically, many attributes of old growth forests are quite apparent upon the landscape. Dense old growth stands tend to have less species represented than is usually found in early successional stands; however there is a difference in both flora and fauna species present in the various types of stands.

The area appears to be heavily used by locals as well as visitors for a variety of purposes. It appears that this is a historical usage which continues. The ruggedness of the land and past ownership patterns have restricted residential development in the area. Access to the area is primarily via logging roads. The lack of public roads, other infrastructure and current ownership patterns will probably continue to suppress residential development. Some private, non-corporate in-holdings do exist in the general area. Largely due to geology and topography, many portions of the road system are in poor repair and may be factors in degradation of other resources. Frequent snow storms and deep accumulations of snow will have an impact upon winter usage of the area.

It is not the intent of the forestry portion of the recommendations to the DNR to do a stand-by-stand micro management appraisal. The development of stand specific management options are best left to resource professionals within the department. The agency's existing policies and procedures regarding public review and input regarding proposed site specific alternatives should provide ample opportunity for public input in an orderly and timely fashion prior to implementing activities.

The following are some general recommendations which the department should consider as it develops a management plan for the Keweenaw Point property.

Develop a working relationship with other landowners in the point area so that

management across the landscape is coordinated.

Consider landscape objectives as a higher priority than stand specific objectives.

Continue to foster multiple use of the area largely following historical patterns, but carefully consider impacts of over-use in specific areas.

Forest management for fiber production, i.e. logging, should be an on-going use, but minimum impact zones should be excluded due to critical habitat or other special features.

Maximize the use of long rotation stands, but do consider some early successional stands to give some balance to ecological diversity and to allow for replacement processes to function if there is an absence of natural disturbance events. It may be useful to employ logging activities to emulate the effects of natural disturbance to accomplish some pre-determined outcomes.

Specifications for enhancement of old growth characteristics, in appropriate stands, should be included in sales contracts.

Use longer stand entry periods within stand rotations. Perhaps 20 to 30 year entries.

Minimize logging activity on very steep sites and in narrow, wet valleys. Logging these areas should be considered only as an alternative to achieve some objective other than fiber production.

Minimize construction of new haul roads. Modern forwarding equipment can economically reach out at least three-eighths of a mile. With cost consideration this can be extended to over a half mile. This greatly reduces the amount of land which is disturbed for road construction. Often only a short stub which the trucks can back into is all that is needed.

Given the large amount of high conservation value and sensitive areas, consider restricting logging activities to dry periods or when there is a reasonable amount of snow accumulation. Extra diligence should be employed when delineating future work areas and schedule activities so as to minimize impacts.

Extra diligence should be exerted relative to monitoring insect and disease activity.

Special attention needs to be given to invasive species, especially exotics. In addition, as climate changes, it will be necessary to try to separate out what is "natural" vs. species which are more "people induced".

Timber sale contracts issued in this area should consider more stringent

requirements regarding aesthetic quality control.

Bids on timber sales in this area might be by invitation only, or “goods for services” types of contracts might be considered in lieu of usual bid formats.

As an educational opportunity, erect some signage which explains the objectives of the logging operations which occur from time to time.

Consider doing what ever logging is necessary, over the whole area, in a short time frame (one or two years) and then go several years before the next entry is made. There are pros and cons to this strategy relative to the public’s perception of use and activity.

Use the habitat classification system as a guide to future forest cover type vs. a particular perception of what the cover type was during some previous historical period. Although from an educational standpoint there is some value in being able to illustrate what the area might have looked like during various eras.

Relative to in-holdings, consider acquiring development and access rights. Various types of easements, trades or fee purchases should be considered. The Forest Legacy program, a federal program administered by the department, should be investigated as a potential way to acquire certain rights to private property.

Use logging contracts as a means to work with other groups in installing and maintaining other infrastructural needs as identified in the over-all plan.

Close some existing logging roads to ORV’s where there are erosion problems, lead into private land, or lead into minimum impact zones.

Improve location signage on existing road system, consider mile markers.

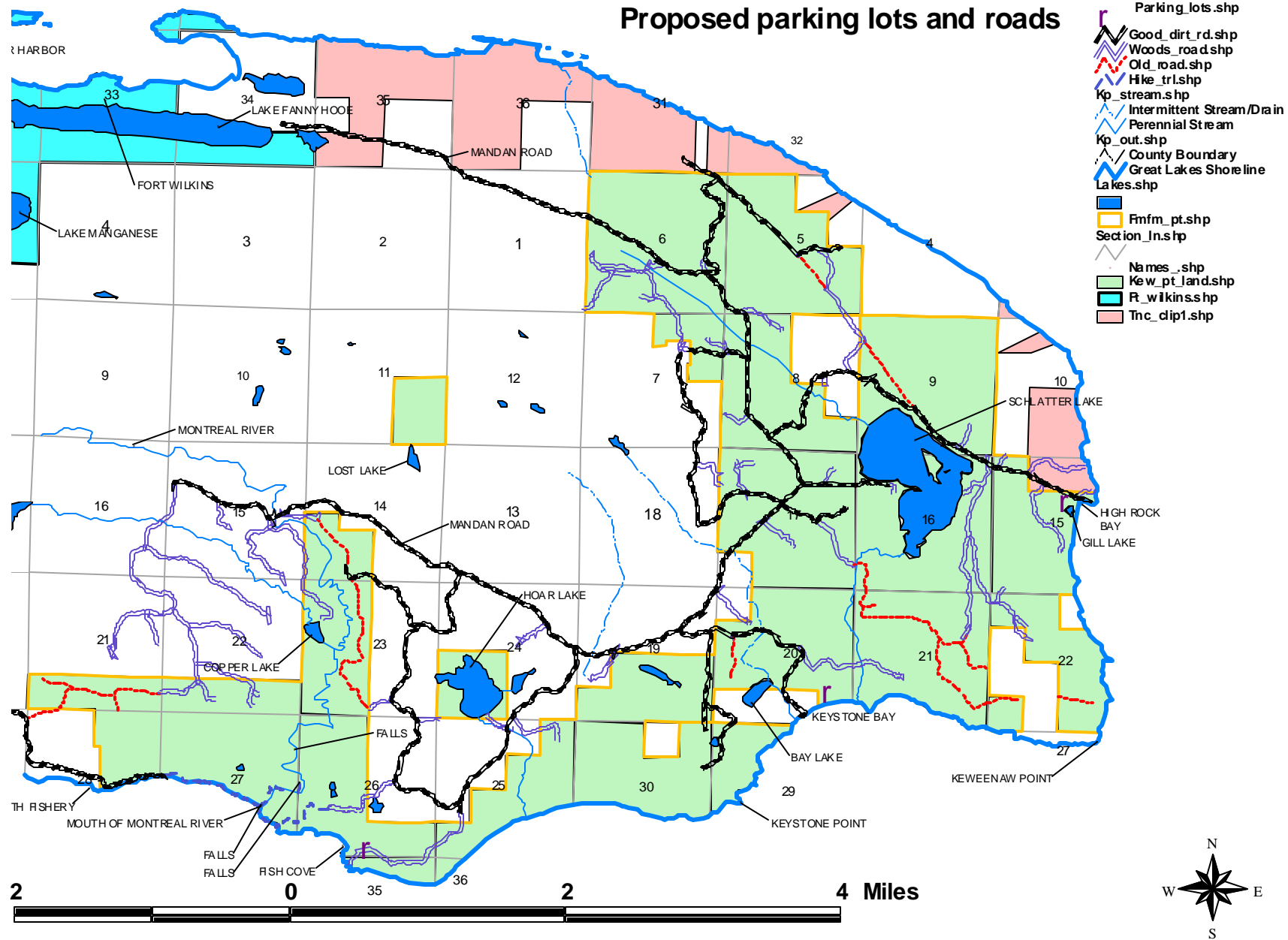
In the treatment of stands where visual quality is a factor, consider using techniques which will encourage quicker development of some large diameter trees, also consider a variable residual basal area strategy so stands are thinned less heavily as one nears public use roads. For the maple stands consider a residual basal area greater than 80 square feet.

In the Montreal River corridor consider an old growth set aside management option. Perhaps, in at least portions of the corridor, a more permanent protection status or designation should be considered.

Committee Resolutions

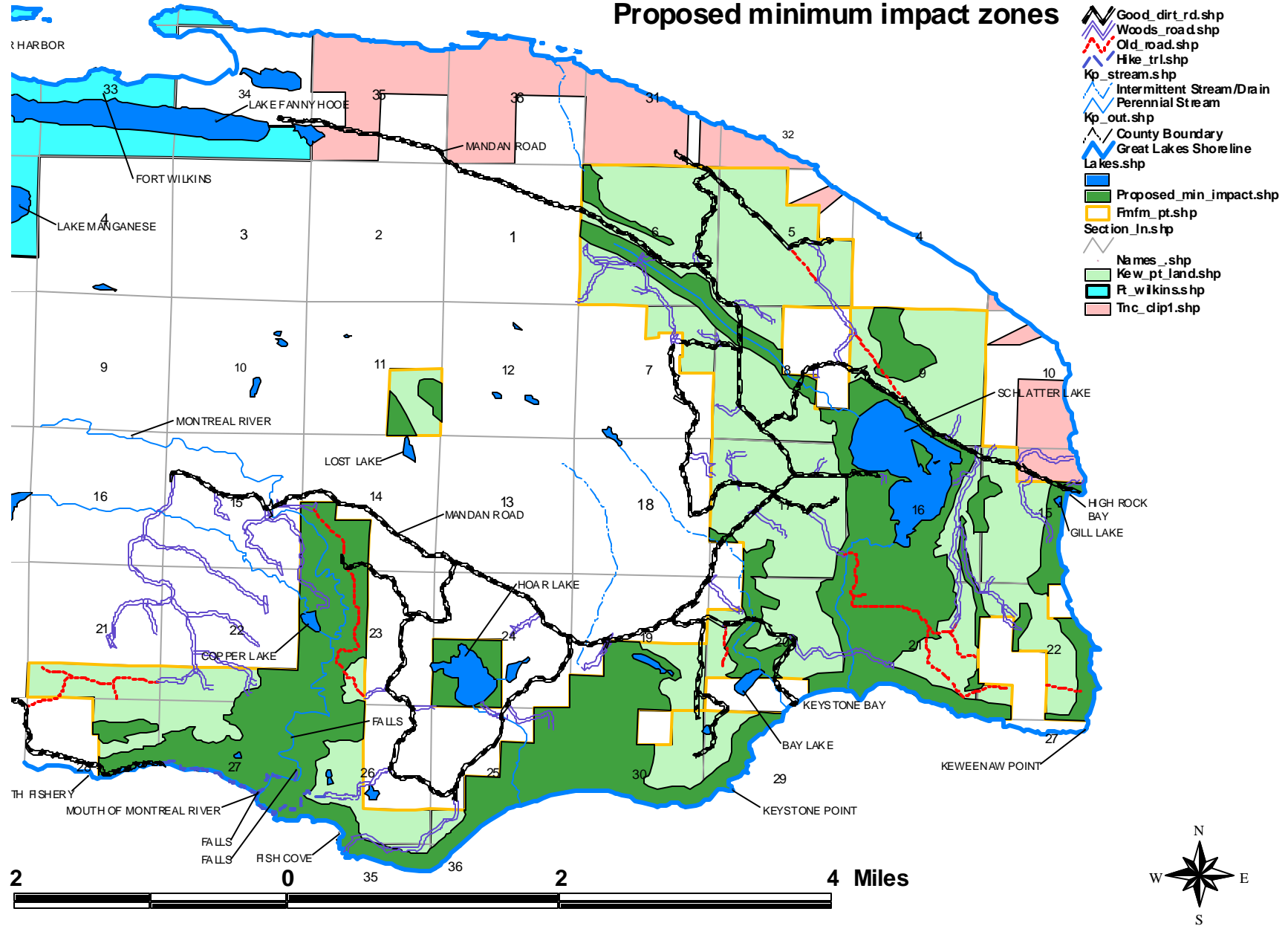
- o Don Keith was given the floor, he then read his motion for a resolution: *We recommend that the Michigan Department of Natural Resources protect, preserve, and manage the Keweenaw Point lands in a manner that will insure future generations the opportunity to enjoy and experience this area in much of the way that now exists.* Motion was seconded by Friederike Gast. Warren asked if Forest Certification fit in with the direction the State is going regarding Keweenaw Point property. Yesney and Nelson both stated there were no conflicts. Deephouse asked for a vote on the resolution. Motion passed.
- o Dana Richter made a motion *propose the Department of Natural Resources develop a brochure with a detailed map, guidelines and educational text, which would be widely distributed.* Jason Wyglendowski seconded the motion. Motion passed.
- o Deephouse made a motion *1) Propose Forest, Mineral and Fire Management Division hire two (2) temporary/seasonal employees specifically to maintain facilities at the tip of the Keweenaw, other duties as deemed necessary; 2) a conservation officer be hired to enforce state statute primarily on the tip of the Keweenaw land.* Seconded by Dana Richter. Motion passed.
- o Sam Raymond asked to keep the area primitive, pursue hiring a conservation officer and continue education of the area. All of these were addressed in other resolutions, but were noted as important.
 - o Charles Eshbach proposed a motion to *ask for and seek Natural Features status of the Montreal corridor excluding parking areas, ATV trails and campsites.* Warren asked Yesney and Nelson how does the DNR administer special areas like the one proposed? Nelson stated the DNR would not do treatments in designated areas. Two unique characteristics within the area were 1) archeological and 2) botanical. Warren suggested flagging areas of concern. Warren seconded the motion. Motion passed

Keweenaw Point Proposed parking lots and roads

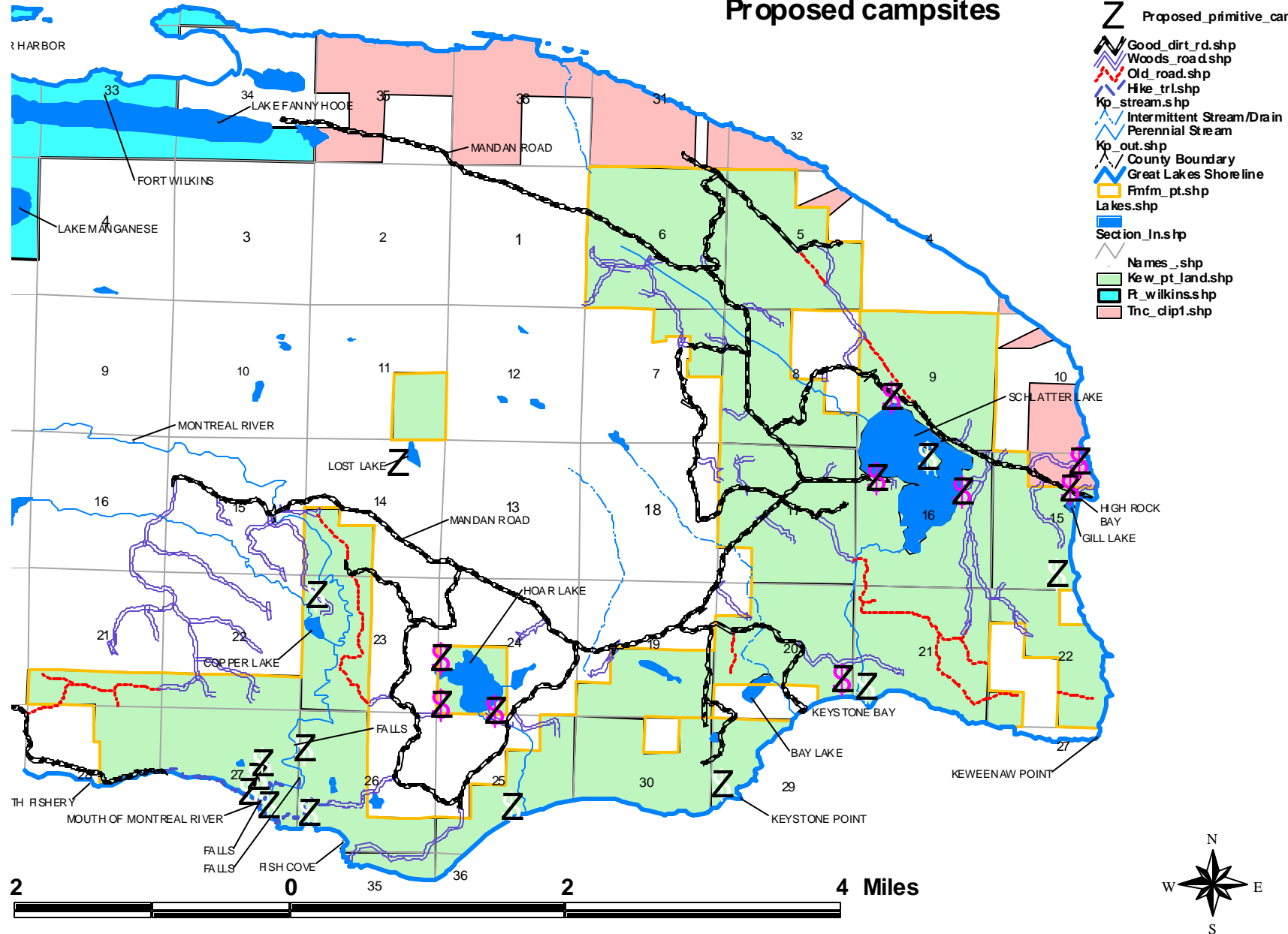


Keweenaw Point

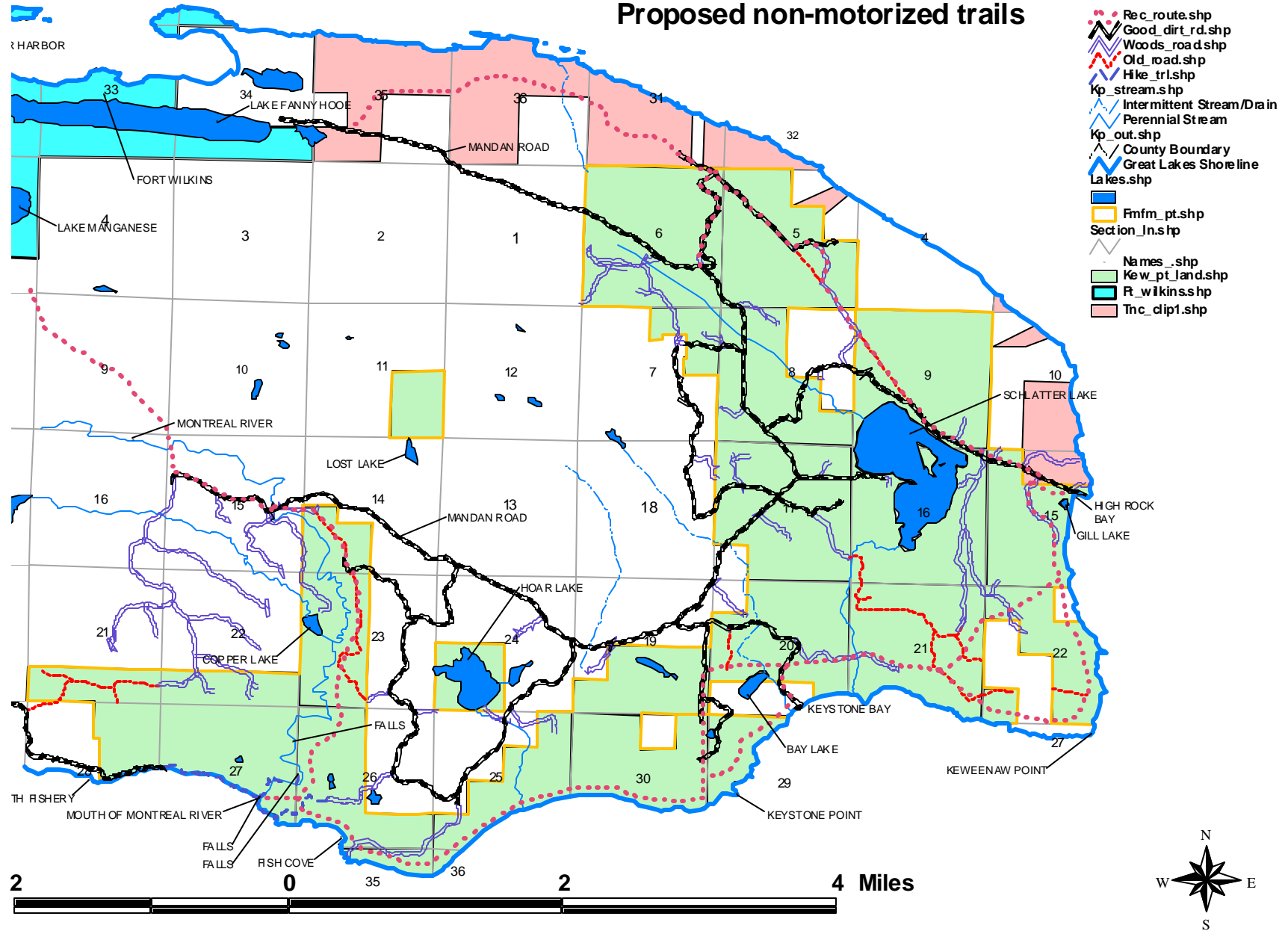
Proposed minimum impact zones



Keweenaw Point Proposed campsites



Keweenaw Point Proposed non-motorized trails



Keweenaw Point Proposed motorized trails

